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FULBRIGHT & JAWORSKI L.L.P.
Michael J. Strauss
801 Pennsylvania Avenue, N. W.
Washington, DC 20004-2623

EXAMINER

HARPER, V PAUL

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Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/687,702 | Applicant(s) SCARANO ET AL. | |
| | Examiner V. Paul Harper | Art Unit 2654 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. All relevant objections are withdrawn as being satisfied.

Claim Rejections – 35 USC § 112

2. All 35 U.S.C. 112 second paragraph rejections are withdrawn as being satisfied.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 11, 13-15, 17, 19-21, 24-28, 30-38, 40, 42-44, 46, 48-50, 53-57, 59, 64 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clements ("Phonetic Searching of Digital Audio," archived from internet on Aug. 4, 2002), hereinafter referred to as Clements in view of Petkovic et al. (U.S. 6,185,527), hereinafter referred to as Petkovic.

Regarding **claim 1**, Clements teaches a method for phonetic searching of digital audio. Clements's method includes the following steps:

- processing an audio segment into a format suitable for rapid searching (Fig. 1, Preprocessing);

Art Unit: 2654

- searching said audio segment in accordance with said rules (p. 3, §Query Term Processing and Searching).

In addition, Clements teaches the creation of search criteria (p.3, §Query Term Processing and Searching; p. 7, §Telephone Opportunities, scan a “message” for particular keywords) and use with applications that have metadata (p. 6, §Audio/Video Applications, ¶3), but Clements does not specifically teach “determining, in response to data associated with said audio segment, an appropriate set of rules to apply to said audio segment. However, the examiner contends that this concept was well known in the art, as taught by Petkovic.

In the same field of endeavor, Petkovic discloses a method for automatic audio content analysis, classification and retrieval. Petkovic’s system has the ability to segment, classify, and search audio based on the content thereof [i.e., define rules for search based on content](col. 3, lines 1-4; col. 13, lines 28-37).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements by specifically providing the features, as taught by Petkovic, because it is well known in the art at the time of invention for the purpose of facilitating the process of retrieval (Petkovic, col. 3, lines 7-10).

Regarding **claim 2**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches “a step of referencing said

Art Unit: 2654

audio segment wherein said audio segment has been previously stored in an electronic media" (p. 5, §Sample Embodiments, "where media is stored").

Regarding **claim 3**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches "a step of recording said audio segment" (p. 5, §Sample Embodiments; p. 6, §Audio/Video Applications, "audio or video databases", "recorded sessions").

Regarding **claim 4**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches "said step of processing includes a step of processing said audio segment into a format suitable for rapid phonetic searching" (p. 2, §THE NEW SEARCH ARCHITECTURE, preprocessing speech to speed up processing).

Regarding **claim 5**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches "said step of processing includes a step of identifying symbols corresponding to discrete portions of said audio segment" (p. 3, §Query Term Processing and Searching, matches made to phonemes representing words or phrases).

Regarding **claim 6**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 5); in addition, Clements teaches "said symbols represent

Art Unit: 2654

respective phonemes of a set of phonemes characteristic of speech” (p. 3, §Query Term Processing and Searching, matches made to phonemes).

Regarding **claim 7**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches that searching includes the steps of:

- attempting to find a match within said audio segment of a target phrase (p. 3, §Query Term Processing and Searching, “word phrases may be specified”).

In addition, Clements teaches the sorting of results by confidence level ((p. 3, §Query Term Processing and Searching, “sorted by decreasing *Confidence_Level*,”), but Clements does not specifically teach that “said target phrase is present within said audio segment at or above a specified confidence level.” However, the examiner contends that this concept was well known in the art, as taught by Petkovic.

In addition, Petkovic’s method includes the step of setting a confidence level (col. 4, lines 25-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing a confidence level, as taught by Petkovic, because it is well known in the art at the time of invention for the purpose of limiting the number of results (Petkovic, col. 4, lines 27-32).

Regarding **claim 8**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 7); in addition, Clements teaches “a step of triggering an event in response to said step of determining whether said target phrase is present within said audio segment” (p. 3, §Query Term Processing and Searching; p. 7, §Telephony Opportunities, “route messages” depending upon presence of a phrase, i.e., presence of name [target phrase] triggers event).

Regarding **claim 9**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches “a step of triggering an event” (p. 3, §Query Term Processing and Searching; p. 7, §Telephony Opportunities, “route messages” depending upon contents), but Clements does not specifically teach “logic operable to trigger an event in response to said search engine finding a target phrase within said audio segment at or above a specified confidence level.” However, the examiner contends that this concept was well known in the art, as taught by Petkovic.

Petkovic's method also includes the step of setting a confidence level (col. 4, lines 25-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements by specifically providing a confidence level, as taught by Petkovic, because it is well known in the art at the time of invention for the purpose of limiting the number of results (Petkovic, col. 4, lines 27-32).

Regarding **claim 11**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1). In addition, Clements teaches the step of incrementing a statistical value in response to finding a match (p. 3, §Query Term Processing and Searching, e.g., assigning *Confidence_Level*, and generating a list that will have a number of items), but Clements does not specifically teach “a step of incrementing a statistical parameter as a result of said searching step resulting in matching a given phrase at or above a specified confidence level.” However, the examiner contends that this concept was well known in the art, as taught by Petkovic.

In addition, Petkovic's method includes the step of setting a confidence level (col. 4, lines 25-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing a confidence level, as taught by Petkovic, because it is well known in the art at the time of invention for the purpose of limiting the number of results (Petkovic, col. 4, lines 27-32).

Regarding **claim 13**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches “said step of searching includes a step of searching said audio segment for a combination of a plurality of phrases” (p. 3, §Query Term Processing and Searching, e.g., “brain cancer” spoken within 60 seconds of “cellular telephone”).

Regarding **claim 14**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 13); in addition, Clements teaches “step of searching said audio segment for said combination of phrases includes a specified order of said phrases within said audio segment” (p. 3, §Query Term Processing and Searching, “temporal operator”).

Regarding **claim 15**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 14); in addition, Clements teaches “the step of triggering an event in response to finding a match for said combination of phrases in said specified order in said audio segment” (p. 3, §Query Term Processing and Searching, added to sorted list; p. 7, §Telephony Opportunities, ¶3, route messages based on search results).

Regarding **claim 17**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 14); in addition, Clements teaches “the step of incrementing a statistical value in response to finding a match for said combination of phrases in said specified order in said audio segment” (p. 3, §Query Term Processing and Searching, e.g., assigning *Confidence_Level* to a match, and generating a list with a size).

Regarding **claim 19**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 13); in addition, Clements teaches “said step of searching

Art Unit: 2654

said audio segment for said combination of phrases includes a specified temporal relationship of said phrases within said audio segment" (p. 3, §Query Term Processing and Searching, e.g., "brain cancer" spoken within 60 seconds of "cellular telephone").

Regarding **claim 20**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 19); in addition, Clements teaches "said step temporal relationship comprises an occurrence of said phrases within a specified time period within said audio segment" (p. 3, §Query Term Processing and Searching, e.g., "brain cancer" spoken within 60 seconds of "cellular telephone").

Regarding **claim 21**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches "said step of searching includes a step of searching said audio segment for a target phrase occurrence within a specified time period within said audio segment" (p. 3, §Query Term Processing and Searching; p. 8, §Multimodal Searching, "delimit the search range").

Regarding **claim 24**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches "a step of performing order validation" (p. 3, §Query Term Processing, for terms in a given order; p. 8, §Multimodal Searching, synchronizing closed captioning signal with verbatim rendering).

Regarding **claim 25**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 24); in addition, Clements teaches “said step of performing order validation includes the step of comparing a parameter of an order associated with said audio segment with a content of said audio segment resulting from said searching step” (p. 8, §Multimodal Searching, synchronizing closed captioning signal with verbatim rendering, parameter corresponds to closed captioning signal).

Regarding **claim 26**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches “said step of searching includes a step of searching for a target phrase, said method further comprising a step of performing order validation including determining whether an order associated with said audio segment is consistent with a result of said step of searching for said target phrase” (p.3, §Query Term Processing and Searching, specified ordering of phrases with confidence level; p. 8, §Multimodal Searching, synchronization).

Regarding **claim 27**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 26); in addition, Clements teaches “a step of entering data for said order wherein said step of performing order validation includes validating whether said data is reflected within said audio segment” (p.3, §Query Term Processing and Searching, specified ordering of phrases with confidence level; p. 8, §Multimodal Searching, note comment that captioning signal may not be exact, i.e., not in correct order).

Regarding **claim 28**, Clements teaches phonetic searching of digital audio. In addition, Clements teaches the following steps:

- importing call data (Figure 1, speech input; p. 7, §Telephony Opportunities);
- selectively, in response to said call data, analyzing an audio segment associated with said call data (p. 7, §Telephone Opportunities, e.g., in call centers, scan messages for complaints, comments, commendations, etc.), said step of analyzing including:
 - processing said audio segment into a format suitable for rapid searching (Fig 1, preprocessing);
 - searching said audio segment in accordance with said rules (p. 3, §Query Processing and Searching).

In addition, Clements teaches the creation of search criteria (p.3, §Query Term Processing and Searching; p. 7, §Telephone Opportunities, scan a “message” for particular keywords) and use with applications that have metadata (p. 6, §Audio/Video Applications, ¶3), but Clements does not specifically teach “determining, in response to said call data, an appropriate set of rules to apply to said audio segment. However, the examiner contends that this concept was well known in the art, as taught by Petkovic.

In the same field of endeavor, Petkovic discloses a method for automatic audio content analysis, classification and retrieval. Petkovic’s system has the ability to segment, classify, and search for audio based on the content thereof [i.e., define rules for search based on content](col. 3, lines 1-4; col. 13, lines 28-37).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements by specifically providing the

Art Unit: 2654

features, as taught by Petkovic, because it is well known in the art at the time of invention for the purpose of facilitating the process of retrieval (Petkovic, col. 3, lines 7-10).

Regarding **claim 30**, Clements describes a system for phonetic searching of digital audio. Clements system includes:

- an audio processor operable to process an audio segment into a format suitable for rapid searching (Fig. 1, Pre-process Engine);
- a search engine operable to search said audio segment in accordance with said rules (Fig. 1, Search Engine).

In addition, Clements teaches the creation of search criteria (p.3, §Query Term Processing and Searching; p. 7, §Telephone Opportunities) and use with applications that have metadata (p. 6, §Audio/Video Applications, ¶3), but Clements does not specifically teach the use of "logic responsive to data associated with said audio segment to determine an appropriate set of rules to apply to said audio segment." However, the examiner contends that this concept was well known in the art, as taught by Petkovic.

In the same field of endeavor, Petkovic discloses a method for automatic audio content analysis, classification and retrieval. Petkovic's system has the ability to segment, classify, and search for audio based on the content thereof [i.e., define rules for search based on content](col. 3, lines 1-4; col. 13, lines 28-37).

Art Unit: 2654

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements by specifically providing the features, as taught by Petkovic, because it is well known in the art at the time of invention for the purpose of facilitating the process of retrieval (Petkovic, col. 3, lines 7-10).

Regarding **claim 31**, this claim has limitations similar to claim 2 and is rejected for the same reasons.

Regarding **claim 32**, this claim has limitations similar to claim 3 and is rejected for the same reasons.

Regarding **claim 33**, this claim has limitations similar to claim 4 and is rejected for the same reasons.

Regarding **claim 34**, this claim has limitations similar to claim 5 and is rejected for the same reasons.

Regarding **claim 35**, this claim has limitations similar to claim 6 and is rejected for the same reasons.

Art Unit: 2654

Regarding **claim 36**, this claim has limitations similar to claim 7 and is rejected for the same reasons.

Regarding **claim 37**, this claim has limitations similar to claim 8 and is rejected for the same reasons.

Regarding **claim 38**, this claim has limitations similar to claim 9 and is rejected for the same reasons.

Regarding **claim 40**, this claim has limitations similar to claim 11 and is rejected for the same reasons.

Regarding **claim 42**, this claim has limitations similar to claim 13 and is rejected for the same reasons.

Regarding **claim 43**, this claim has limitations similar to claim 14 and is rejected for the same reasons.

Regarding **claim 44**, this claim has limitations similar to claim 15 and is rejected for the same reasons.

Art Unit: 2654

Regarding **claim 46**, this claim has limitations similar to claim 17 and is rejected for the same reasons.

Regarding **claim 48**, this claim has limitations similar to claim 19 and is rejected for the same reasons.

Regarding **claim 49**, this claim has limitations similar to claim 20 and is rejected for the same reasons.

Regarding **claim 50**, this claim has limitations similar to claim 21 and is rejected for the same reasons.

Regarding **claim 53**, this claim has limitations similar to claim 24 and is rejected for the same reasons.

Regarding **claim 54**, this claim has limitations similar to claim 25 and is rejected for the same reasons.

Regarding **claim 55**, this claim has limitations similar to claim 26 and is rejected for the same reasons.

Regarding **claim 56**, this claim has limitations similar to claim 27 and is rejected for the same reasons.

Regarding **claim 57**, Clements describes a system with the following components:

- telephone equipment connected to receive call data (p. 7, §Telephone Opportunities, paragraph 3, in call centers, scanning messages, thus connected);
- an audio processor responsive to said call data for selectively analyzing an audio segment associated with said call data, said audio process operable to process said audio segment into a format suitable for rapid searching (Fig. 1, Pre-process Engine);
- search said audio segment in accordance with said rules (p. 3, §Query Term Processing and Searching, Fig. 1, Search Engine).

In addition, Clements teaches the creation of search criteria (p.3, §Query Term Processing and Searching; p. 7, §Telephone Opportunities, scan a “message” for particular keywords) and use with applications that have metadata (p. 6, §Audio/Video Applications, ¶3), but Clements does not specifically teach “determining, in response to said call data, an appropriate set of rules to apply to said audio segment. However, the examiner contends that this concept was well known in the art, as taught by Petkovic.

In the same field of endeavor, Petkovic discloses a method for automatic audio content analysis, classification and retrieval. Petkovic’s system has the ability to segment, classify, and search for audio based on the content thereof [i.e., define rules for search based on content](col. 3, lines 1-4; col. 13, lines 28-37).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements by specifically providing the features, as taught by Petkovic, because it is well known in the art at the time of invention for the purpose of facilitating the process of retrieval (Petkovic, col. 3, lines 7-10).

Regarding **claim 59**, Clements teaches a method for phonetic searching of digital audio. Clements's method includes the following:

- recording an audio segment (p. 5, §Sample Embodiments; p. 6, §Audio/Video Applications, “audio or video databases”, “recorded sessions”);
- searching said audio segment in accordance with said rules (p.3, §Query Term Processing and Searching); and
- providing a report based on said search (p. 3, §Query Term Processing and Searching, returning a sorted list of results).

In addition, Clements teaches the creation of search criteria (p.3, §Query Term Processing and Searching; p. 7, §Telephone Opportunities, scan a “message” for particular keywords) and use with applications that have metadata (p. 6, §Audio/Video Applications, ¶3), but Clements does not specifically teach “setting rules, in response to metadata associated with said audio segment, for searching for spoken words or phrases in said audio segment using speech recognition technology.” However, the examiner contends that this concept was well known in the art, as taught by Petkovic.

In the same field of endeavor, Petkovic discloses a method for automatic audio content analysis, classification and retrieval. Petkovic's system has the ability to segment, classify, and search for audio based on the content thereof [i.e., define rules for search based on content](col. 3, lines 1-4; col. 13, lines 28-37).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements by specifically providing the features, as taught by Petkovic, because it is well known in the art at the time of invention for the purpose of facilitating the process of retrieval (Petkovic, col. 3, lines 7-10).

Regarding **claim 64**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1). In addition, Clements teaches "searching for a target utterance selected in response to said data related to said audio segment" (p. 7, §Telephony Opportunities, ¶3, scan "messages for callback" for keywords and route to targeted individuals).

Regarding **claim 70**, this claim has limitations similar to claim 64 and is rejected for the same reasons.

4. Claims 10, 12, 16, 18, 39, 41, 45, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clements in view of Petkovic and Frakes et al., ("Information

Retrieval, Data Structures & Algorithms" Prentice Hall, 1992), hereinafter referred to as Frakes.

Regarding **claim 10**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches the use of queries with a Boolean grammar and assigning the results confidence levels that can trigger other events (p. 3, §Query Term Processing and Searching; p. 7, §Telephony Opportunities), but Clements does not specifically teach "a step of triggering an event as a result of said searching step resulting in not finding a match [a] for a given phrase at or above a specified confidence level [b]." However, the examiner contends that these concepts were well known in the art, as taught by Frakes and Petkovic.

(First [a]) In the same field of endeavor, Frakes teaches information retrieval where some queries attempt to find documents that do *not* contain a particular pattern (p. 266, second paragraph).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing the feature, as taught by Frakes, because it is well known in the art at the time of invention for the purpose more effectively retrieving information (Frakes, p. 266, end of 1st paragraph).

(Next [b]) In the same field of endeavor, Petkovic discloses a method for automatic audio content analysis. Petkovic's method includes the step of setting a confidence level (col. 4, lines 25-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing a confidence level, as taught by Petkovic, because it is well known in the art at the time of invention for the purpose of limiting the number of results (Petkovic, col. 4, lines 27-32).

Regarding **claim 12**, this claim has limitations that are similar to claims 17 and 10 and is rejected for the same reasons.

Regarding **claim 16**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 14); in addition, Clements teaches the step of triggering an event in response to making a match in a particular order (p. 3, §Query Term Processing and Searching; p. 7, §Telephony, "routing"), but Clements does not specifically teach that the triggering is in response to *not* finding a match for said combination of phrases in said specified order in said audio segment. However, the examiner contends that this concept was well known in the art, as taught by Frakes.

In the same field of endeavor, Frakes teaches information retrieval where some queries attempt to find documents that do *not* contain a particular pattern (p. 266, second paragraph).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing the features, as taught by Frakes, because it is well known in the art at the

Art Unit: 2654

time of invention for the purpose more effectively retrieving information (Frakes, p. 266, end of 1st paragraph).

Regarding **claim 18**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 14). In addition, Clements teaches “the step of incrementing a statistical value in response to finding a match for said combination of phrases in said specified order in said audio segment” (p. 3, §Query Term Processing and Searching, e.g., assigning *Confidence_Level*, and generating a list that will have a number of items), but Clements does not specifically teach “the step of incrementing a statistical value in response to *not* finding a match for said combination of phrases in said specified order in said audio segment. However, the examiner contends that this concept was well known in the art, as taught by Frakes.

In the same field of endeavor, Frakes teaches information retrieval where some queries attempt to find documents that do *not* contain a particular pattern (p. 266, second paragraph).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing the features, as taught by Frakes, because it is well known in the art at the time of invention for the purpose more effectively retrieving information (Frakes, p. 266, end of 1st paragraph).

Art Unit: 2654

Regarding **claim 39**, this claim has limitations that are similar to claim 10 and is rejected for the same reasons.

Regarding **claim 41**, this claim has limitations that are similar to claims 17 and 10 and is rejected for the same reasons.

Regarding **claim 45**, this claim has limitations that are similar to claim 16 and is rejected for the same reasons.

Regarding **claim 47**, this claim has limitations that are similar to claim 18 and is rejected for the same reasons.

5. Claims 22, 23, 29, 51, 52, 58, 60-63, 65-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clements in view of Petkovic and further in view of Glowny et al. (U.S. Patent Application Publication 2001/0040942 A1), hereinafter referred to as Glowny.

Regarding **claim 22**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 1); in addition, Clements teaches "providing an indication of satisfaction of a criteria in response to said steps of searching and analyzing" (p. 3, §Query Term Processing and Searching, a sorted list). Clements further teaches the use of metadata during searches (p. 6, §Audio/Video Applications), and the application of

Art Unit: 2654

the techniques to telephony (p. 7, §Telephony Opportunities), but Clement does not specifically teach “analyzing Computer Telephony Integration (CTI) data associated with said audio segment.” However, the examiner contends that this concept was well known in the art, as taught by Glowny.

In the same field of endeavor, Glowny discloses a method for recording, storing, and retrieving telephone call information. Glowny's search criterion uses CTI data (¶[0003]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing the features, as taught by Glowny, because it is well known in the art at the time of invention for the purpose more effectively retrieving information (Glowny, ¶[0003]).

Regarding **claim 23**, Clements in view of Petkovic in view of Glowny teaches everything claimed, as applied above (see claim 22), but Clements does not specifically teach “said step of analyzing said CTI data includes a step of analyzing CTI data selected from the set consisting of, (i) called number (dialed number identification service or “DNIS”), (ii) calling number (Automatic Number Identification or “ANI”).” However, the examiner contends that this concept was well known in the art, as taught by Glowny.

Art Unit: 2654

Glowny further discloses that the CTI data can be used to further enhance the retrieval process, and that this data includes telephone numbers, called number (DNIS) and Agent ID (¶[0003]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing the features, as taught by Glowny, because it is well known in the art at the time of invention for the purpose more effectively retrieving information (Glowny, ¶[0003]).

Regarding **claim 29**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 28), but Clements does not specifically teach "said call data includes Computer Telephony Integration data selected from the group consisting of (i) called number (dialed number identification service or "DNIS"), (ii) calling number (Automatic Number Identification or "ANI")." However, the examiner contends that this concept was well known in the art, as taught by Glowny.

In the same field of endeavor, Glowny discloses a method for recording, storing, and retrieving telephone call information. Glowny further discloses that the CTI data can be used to further enhance the retrieval process, and that this data includes telephone numbers, called number (DNIS) and Agent ID (¶[0003]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing the features, as taught by Glowny, because it is well known in the art at the

Art Unit: 2654

time of invention for the purpose more effectively retrieving information (Glowny, ¶[0003]).

Regarding **claim 51**, this claim has limitations that are similar to claim 22 and is rejected for the same reasons.

Regarding **claim 52**, this claim has limitations that are similar to claim 23 and is rejected for the same reasons.

Regarding **claim 58**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 57), but Clements does not specifically teach "said call data includes Computer Telephony Integration data selected from the group consisting of (i) called number (dialed number identification service or "DNIS"), (ii) calling number (Automatic Number Identification or "ANI")." However, the examiner contends that this concept was well known in the art, as taught by Glowny.

In the same field of endeavor, Glowny discloses a method for recording, storing, and retrieving telephone call information. Glowny further discloses that the CTI data can be used to further enhance the retrieval process, and that this data includes telephone numbers, called number (DNIS) and Agent ID (¶[0003]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing the features, as taught by Glowny, because it is well known in the art at the

time of invention for the purpose more effectively retrieving information (Glowny, ¶[0003]).

Regarding **claim 60**, Clements in view of Petkovic teaches everything claimed, as applied above (see claim 28). But Clements does not specifically teach:

- a) receiving call related event data associated with a telephone call, said call related event data related to said audio segment;
- b) extracting said audio segment from said telephone call; and
- c) correlating said data related to said audio segment to said audio segment.

However, the examiner contends that these concepts were well known in the art, as taught by Glowny.

In the same field of endeavor, Glowny discloses a method for recording and storing telephone call information. In particular Glowny teaches dynamically [event driven] recording devices, a) and b) above (Fig. 1, ¶'s [0037], [0044]), and matching data from the audio recordings with data sent by the CTI Message router, c) above (Fig. 1, ¶[0037], also ¶[0003] teaches that CTI data includes data related to the call, metadata).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clements in view of Petkovic by specifically providing the operations, as taught by Glowny, because it is well known in the art at the time of invention that such operations facilitate the monitoring, recording and playing back of telephone calls (Glowny, ¶[0008]).

Regarding **claim 61**, Clements in view of Petkovic and Glowny teaches everything claimed, as applied above (see claim 60). In addition, Glowny teaches “said data related to said audio segment includes metadata” (see rejection of claim 60, and Glowny, ¶’s [0003], [0004]).

Regarding **claim 62**, Clements in view of Petkovic and Glowny teaches everything claimed, as applied above (see claim 60). In addition, Glowny teaches “said call related event data includes **information selected from the group** consisting of (i) time/day of call; (ii) telephone number of a client party; (iii) extension number of an agent; and (iv) trunk identification” (see rejection of claim 60, and Glowny, ¶’s [0003], CTI data include telephone numbers of parties involved, [0004])

Regarding **claim 63**, Clements in view of Petkovic and Glowny teaches everything claimed, as applied above (see claim 60). In addition, Glowny teaches “said call related event data includes **data selected from the group** consisting of (i) dialed number identification service (DNIS); (ii) Automatic Number Identification /Calling Line Identifier (ANI/CLID); (iii) collected digital; and (iv) agent identification” (see rejection of claim 60, Glowny, ¶’s [0003] DNIS data, [0004]).

Regarding **claim 65**, this claim has limitations similar to claim 60 and is rejected for the same reasons.

Regarding **claim 66**, this claim has limitations similar to claim 61 and is rejected for the same reasons.

Regarding **claim 67**, this claim has limitations similar to claim 60 and is rejected for the same reasons.

Regarding **claim 68**, this claim has limitations similar to claim 62 and is rejected for the same reasons.

Regarding **claim 69**, this claim has limitations similar to claim 63 and is rejected for the same reasons.

Response to Arguments

6. Applicant's arguments filed 2/02/2005 have been fully considered but they are not persuasive.

7. Applicant asserts beginning on page 15:

However, as discussed during the Interview, while the cited references describe various core speech search engines, *none describe or suggest the use of data associated with an audio segment to determine a set of rules, and a search of the audio segment being performed in accordance with those rules.* For example, according to an embodiment of the invention demonstrated during the interview, metadata associated with the audio segment (i.e., data about the audio) characterizing some aspect of the audio segment (e.g., time, telephone number, etc.) is used to define

target phrases to be identified in the associated audio segment. The prior art fails to describe or suggest such a feature and, accordingly, fails to anticipate or render obvious the claims as amended. The present invention is an agnostic to the technology used for the core speech search engine. Accordingly, the present invention could use either the core search engine described in Clements or other similar engines. [Italics and underlining added]

As stated in the rejections (of claims 1, 28, 30, 57 and 59), Petkovic discloses a system that has the ability to segment, classify, and search for audio based on the content thereof [i.e., define rules for search based on content] (col. 3, lines 1-4; col. 13, lines 28-37). For example, Petkovic discusses the classification of audio (i.e., determining its meta pattern genus) and then only send those audio files classified as "newcasts" to the speech recognition engine for further processing and search (col. 7, line 60 through col. 8, line 41). Furthermore, Clements teaches the scanning "messages" for particular keywords (p. 7, §Telephony Opportunities, §3); in other words, if the audio file meets certain criteria (it is a "message"), then it is scanned for particular keywords. Thus Petkovic teaches the classification and assignment of metadata to audio [and the further execution of certain rules related to search], and Clements teaches the execution of rules [the search for certain keywords] relating to message files.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2654

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Paul Harper whose telephone number is (571) 272-7605. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2654

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

03/18/2005

V. Paul Harper
Patent Examiner
Art Unit 2654


RICHMOND DORVIL
SUPERVISORY PATENT EXAMINER